CLAIMS

1 A brushless direct current fan motor comprising:

a rotor having a plurality of blades;

a stator having excitation windings to be excited to rotate the rotor;

a drive circuit, arranged at the stator side, for supplying excitation current to the excitation windings according to a speed control command; and

a speed control command generating means, arranged at the stator side, for executing operation according to an input signal and generating the speed control command;

wherein the speed control command generating means includes a microcomputer with a function which enables the microcomputer to communicate with an external equipment.

2. The brushless direct current fan motor according to claim 1 further comprising:

a speed detector for detecting a rotational speed of the rotor; and

a current detector for detecting the excitation current flowing through the excitation windings;

wherein the drive circuit is so constructed as to supply the excitation current to the excitation current windings under the pulse width modulation control;

wherein the microcomputer carries out a function to operate the speed control command based on control

conditions transmitted from the external equipment and a signal indicating the rotation speed detected by the speed detector and/or a signal indicating the excitation current detected by the current detector.

3. The brushless direct current fan motor according to claim 1 or 2, wherein the microcomputer has a function which enables the microcomputer to bi-directionally communicate with the external equipment by using serial communication based on a predetermined communication protocol.

4. The brushless direct current fan motor according to claim 1, wherein the microcomputer is so programmed as to operate and output the speed control command to improve characteristics of the airflow volume-static pressure characteristic.

5. The brushless direct current fan motor according to claim 1, wherein the speed control command generating means is so constructed that pulse width modulation control frequency of the drive circuit is set higher when the rotator rotates at low speed than at high speed.

6. The brushless direct current fan motor according to claim 5, wherein the speed control command generating means is so constructed that the pulse width modulation control frequency is switched to 16KHz when a motor rotates at low speed and to 1KHz when a motor rotates at high speed.